

OCCUPATIONAL SAFETY AND HEALTH IN CTE: A VIEW OF CURRENT PRACTICES

Career and Technical Education Programs in the
state of Kansas

**The Key to Safe &
Healthful Practice within
CTE Programs**



RESEARCH QUESTIONS

- 1. What is the distribution of practicing secondary/post-secondary CTE instructors with a structured occupational safety and health program as an integral component of their curriculum and instruction?
 - 2. What perceived obstacles and deficiencies are associated with safety and health practices within CTE?
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FINDINGS CATEGORIES

- Management Commitment
- Employee and Student Involvement
- Potential Hazards
- Hazard Prevention
- Training Personnel
- Perceived Obstacles

Secondary percentages are listed first with Post-secondary in parenthesis

MANAGEMENT COMMITMENT

- **77.9% (74.1) implement a comprehensive OSH program as an integral part of curriculum and instruction.**
- **37.2% (50.6) reported top administration have issued a written policy supporting a safe and healthy environment in the school**
- **49% (46) report funds are allocated for implementation of a CTE health and safety program.**
- **48.3% (60) report the health and safety elements of their CTE program is regularly evaluated.**

EMPLOYEE AND STUDENT INVOLVEMENT

- **86.9% (72.9) reported the Health and Safety Procedures are communicated to students verbally, 67.6% (58.8) in writing, 69% (54.1) through assignments, 20% (11.8) in other ways.**
- **85.5% (80) used sharing of personal experiences related to health and safety to communicate the importance of health and safety to students, 44.8% (56.5) used theory lessons.**
- **84.1% (75.3) report that students are encouraged to look for and report potential classroom/lab hazards to the program instructor, 54.5% (58.8) school employees, 33.1% (37.6) advisory committee members, and 13.1% (9.4) others.**

POTENTIAL HAZARDS

- Less than **50%** of respondents (secondary and post-secondary) conduct a walkthrough inspection with safety checklists to identify potential hazards within their program.
- Only **26.9%** (45.9) maintain an updated record of chemical inventory.
- Less than 50% (**37.6**) of appropriate parties (school employees and students) are encouraged to report “close calls” related to hazardous conditions and incidents.
- **66.2%** (35.3) provide personal protective equipment (PPE) to students free of charge.

HAZARD PREVENTION

- Only **50.3% (51.8)** reported having a written safety and health program plan.
- **79.3% (70.6)** reported that applicable PPE are continuously incorporated in their CTE programs.
- **59.3% (50.6)** have written safety rules with clear-cut consequences for violations before they occur.
- Only **26.9% (28.2)** reported seeking outside expert advice in assisting with difficult health and safety issues.

TRAINING PERSONNEL

- 80% (67.1) of students in the respondents CTE programs received safety training prior to participation in the lab.
- Requiring students to receive 100% on a safety test prior to participation in a laboratory was reported 20.7% (35.3) yes and 62.8% (35.3) no.

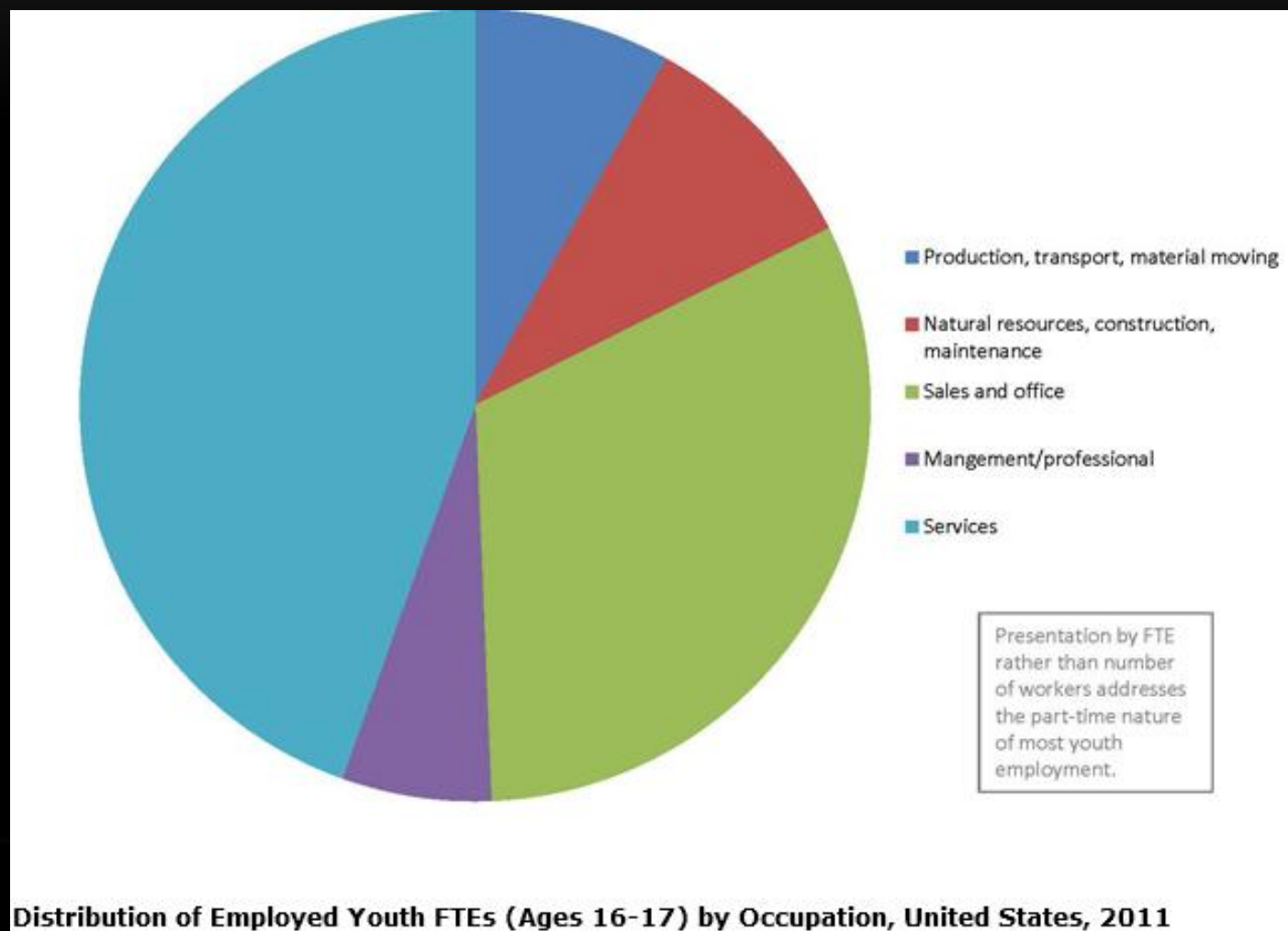
PERCEIVED OBSTACLES

- Questions of the survey pertaining to perceived obstacles in implementing an occupational safety and health plan within individual CTE programs used a four point Likert scale (strongly disagree to strongly agree) to measure responses.
- Lack of funding, high student enrollment per class, chronic student absences and lack of adequate classroom/laboratory space surfaced as top obstacles for secondary settings.
- Lack of classroom and lab organization was in the top four for post-secondary.
- Serving as a CTSO advisor was perceived as the lowest obstacle with lack of PPE following.

POINTS OF INTEREST

- Attrition of respondents as the survey progressed.
 - Anecdotal responses expose conviction of respondents and concern of incrimination.
 - A need for addressing the perceived obstacles and deficiencies in the state.
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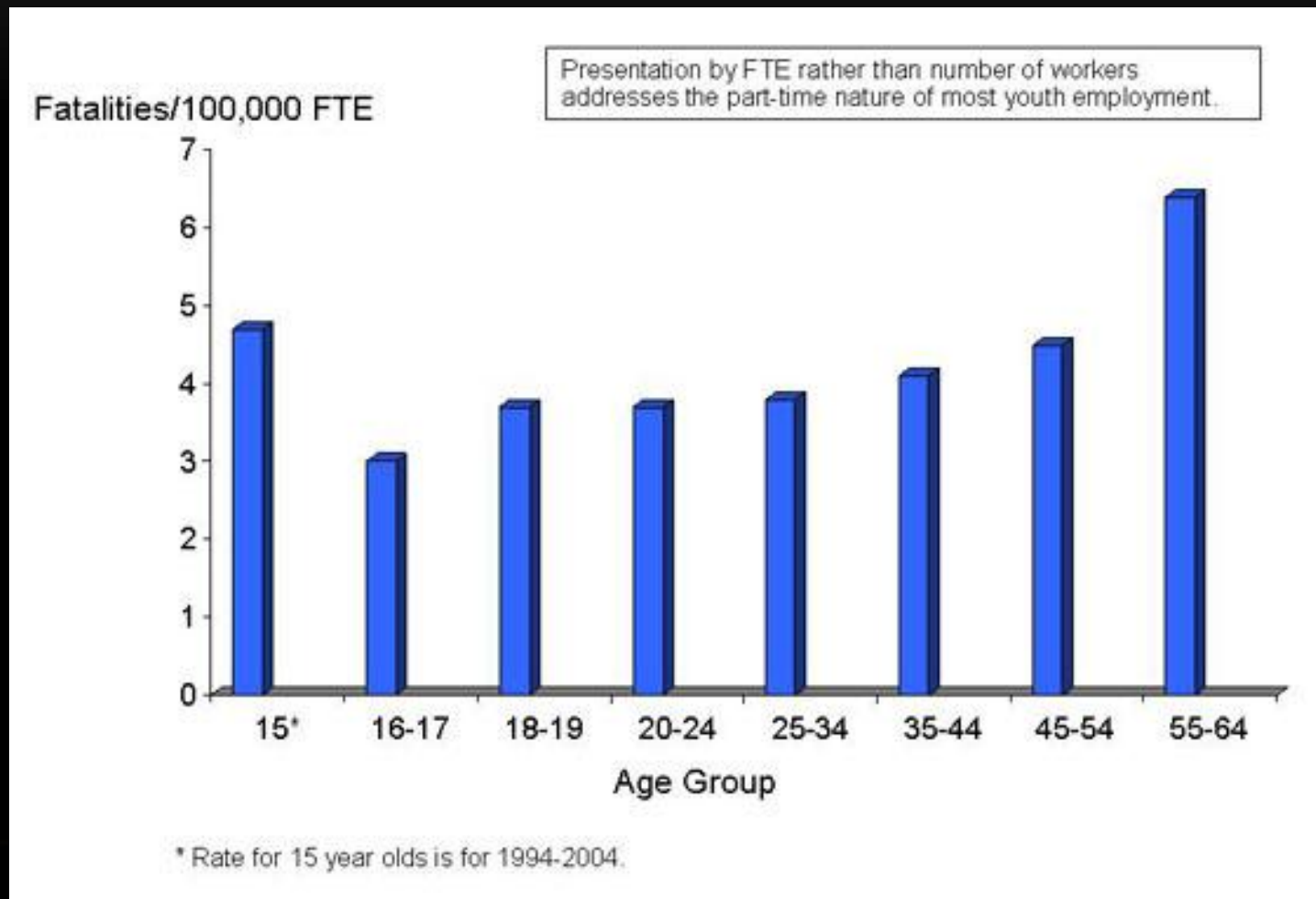
YOUNG WORKERS



Data Overview of Youth Worker Deaths and Injuries, United States

- **Deaths:** 27 deaths of youth < 18 years in 2009, 13 among youth <16 years
(Source: Bureau of Labor Statistics' (BLS) Census of Fatal Occupational Injuries.)
- **Nonfatal Injuries:** There is not a single source of data for nonfatal injuries and illnesses. The following are data from a variety of systems.
 - **Est. 26,500 emergency department-treated injuries and illnesses among 15-17 year-olds in 2009**
(Source: National Electronic Injury Surveillance System- NIOSH Work Supplement. NIOSH estimates that 1/3rd of work-related injuries are treated in hospital emergency departments.)
 - **Est. 4,380 injuries and illnesses requiring at least one day away from work among youth <18 years in 2009**
(Source: BLS Survey of Occupational Injuries and Illnesses. Data provided by Jim Rice. Data are reported by employers in a survey that excludes small farms, government agencies and the self-employed.)
 - **Est. 5,773 work-related injuries of youth <20 years on farms in 2006**
(Source: NIOSH Childhood Agricultural Injury Survey. Data reported by farm operators).

YOUNG WORKER EMPLOYMENT, INJURIES & ILLNESSES



NIOSH INFORMATION

- Young workers
 - Know about and follow safe work practices
 - Ask about training
 - Ask about hazards
 - Know your rights
 - Know the laws
- Educators
 - Talk to students about work
 - Ensure the safety of school-based work experience programs
 - Include worker safety and health in the school curriculum
 - Know the laws

Resource: NIOSH Alert: Preventing Deaths, Injuries, and Illnesses of Young Workers, DDHS (NIOSH) Publication 2003-128.

SO WHAT TO DO NOW?

How do we be a part of the solution?

THREE STEPS TO PROGRESS

- Provide funding for workshop
- Provide 10-hour trainings within the State of Kansas for teachers and interested parties
- Provide resources for teachers online

PROVIDE FUNDING FOR TRAINING

- Through the KCCTE
 - Funding for workshops
 - Publicity
 - Space allocation
 - Participants travel/lodging
 - Speaker
 - Materials

10-HOUR TRAININGS

- Provide 10-hour trainings within the State of Kansas for teachers and interested parties
 - One training has been held
 - Kansas Department of Labor representative
 - 10-hour General Industry topics covered
 - Introduction to OSHA
 - Hazard Communication
 - Hazardous Materials
 - Fire Protection & Emergency Action Plan
 - Machine Guarding
 - Electrical
 - Bloodborne Pathogens
 - Personal Protective Equipment
 - Walking & Working surfaces

COMMENTS FROM THE PARTICIPANTS

- June 3-4 @ Pittsburg State University
- _____ of participants
 - Enjoyed the hands-on concepts, interactive and visual lecture
 - [Instructor] conveyed expertise in an enthusiastic manner
 - A lot of good information about OSHA, it's purpose, safety policies, theory & what constitutes violations
 - Great materials/visuals and presentations – activities were awesome and very applicable to HS classroom too!
 - Content was very applicable to job. It was a topic that wasn't covered in teacher preparation.
 - Relaxed atmosphere; collaboration between presenter and participants

PROVIDE RESOURCES FOR TEACHERS ONLINE

- Resources and summaries of various safety topics will be posted online
 - Current topics:
 - walking-working surfaces
 - emergency action plans
 - PPE
 - environmental controls
 - hazardous materials
 - machine guarding
 - material handling/storage
 - electrical safety
 - etc.

POTENTIAL WORKSHOP NEEDS

- Shop hazard elimination
- Safe shop practices
- Electrical
- Plumbing
- Small engines
- Cabinetry
- Furniture Fabrication
- PLC's in manufacturing
- Emergency Plans
- Welding Safety
- Brazing/Cutting/Arc Carbon Arc
- NFPA
- GHS Labeling Updates
- Building codes
- Construction electrical
- Welding
- CADD
- Architectural Design
- Drafting

SUMMARY

- Data shows the need for safety integration in workforce educational programs.
 - Teachers desire resources and support for improving safety training in the classroom.
 - Continued efforts are planned to improve the focus on safety in career and technical education programs.
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QUESTIONS?

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